

Chapter 6

Assessment of Cumulative Impacts

6.1 Introduction

This chapter describes the likely impacts on federally listed ASIP-covered species of future nonfederal activities, including future state, tribal, local, and private actions that are reasonably certain to occur in the project area, in combination with the SDIP. Future federal actions that are unrelated to the SDIP are not considered in this chapter because they require separate consultation pursuant to Section 7 of the ESA (U.S. Fish and Wildlife Service and National Marine Fisheries Service 1998). Cumulative impacts on species that are not federally listed are described in the SDIP EIS/EIR (Jones & Stokes 2005).

Federally listed fish and wildlife species that are covered under this ASIP are:

- riparian brush rabbit,
- San Joaquin kit fox,
- giant garter snake,
- Central Valley fall-/late fall-run Chinook salmon,
- Central Valley spring-run Chinook salmon,
- Central Valley steelhead,
- delta smelt,
- Sacramento River winter-run Chinook salmon, and
- VELB.

The area for analyzing cumulative impacts on ASIP-covered plants, fish, and wildlife (collectively referred to as biological resources in this cumulative impacts analysis) was determined to be the study area (Figure 1-1). The study area includes the area covered by the USGS quadrangles surveyed as part of the CNDDDB search (Section 1.9, SDIP Area). The study area represents the probable area in which project impacts on biological resources could interact with other development and have significant cumulative impacts on sensitive biological resources.

6.2 Related and Reasonably Foreseeable Nonfederal Actions

This analysis incorporates all reasonably foreseeable, relevant projects and focuses on those projects that, when combined with the SDIP, could contribute to cumulative impacts. Scoping for the SDIP EIS/EIR was used to identify the projects considered in this cumulative impacts analysis.

The following criteria were used to identify the projects that were evaluated in the analysis of cumulative impacts.

- The action is under active consideration.
- The action has recently completed project-level environmental documentation, or environmental documents are in some stage of active completion.
- The action will be completed or operational within the timeframe being considered for the SDIP (assumed to be 2020).
- The action, in combination with the SDIP alternatives, has the potential to affect the same resources.

Nonfederal projects meeting these criteria are included in this cumulative impacts analysis. This cumulative impacts analysis also considered the following factors to determine whether the SDIP would result in significant cumulative impacts on biological resources:

- historical and currently known distribution of special-status wildlife species in the study area and statewide;
- extent of sensitive biological resources protected on public lands and current known threats to these resources on private lands (e.g., proposed development, current agricultural practices, and land management practices); and
- documented impacts associated with approved or pending future projects in the study area.

Based on these factors, the SDIP, in combination with past, present, or reasonably foreseeable future projects, could have a cumulative impact on ASIP-covered fish and wildlife species that are known to occur in the study area. However, these projects are not expected to result in a significant cumulative decline of listed species. No additional conservation measures are required beyond those proposed for the potential impacts described in Chapters 4 and 5.

The following projects were determined to contribute to a cumulative impact on federally listed species.

6.2.1 Mountain House New Town

Trimark Communities has gained approval to develop a new community in the western portion of San Joaquin County along the Alameda–San Joaquin County line and north of Interstate 205. When buildout is complete, 16,105 residential units on 4,784 acres will be developed. Mountain House will be located directly south of Old River and west of Patterson Pass Road and will include residential, commercial, and some industrial development. It has been designed to accommodate all the needs of the expected 43,522 residents, including housing, jobs, retail stores, commercial space, open space, and public services, such as schools, emergency services, and roads. The EIR was completed in 1994. Construction began in 2003.

6.2.2 River Islands Development

The Cambay Group/Califia, LLC is proposing to develop approximately 4,990 acres of agricultural land and open space known as the River Islands at Lathrop Project. The project applicant intends to build a mixed-use residential/commercial development on Stewart Tract and Paradise Cut. Stewart Tract is an island bounded by Paradise Cut, the San Joaquin River, and Old River. Paradise Cut is a flood control bypass that connects the San Joaquin River and Old River in the Delta. This mixed-use development is expected to include a town center, employment center, dock facilities, residences, and golf courses. It is expected to generate 31,680 residents and 16,751 jobs at full buildout. The draft subsequent EIR was filed in October 2002, and buildout is planned for 2025. The River Islands development project also includes enhancement or restoration of riparian, wetland, and open water habitat on Stewart Tract to mitigate impacts of the project.

6.3 Cumulative Impacts on ASIP-Covered Fish and Wildlife Species

The following sections describe cumulative impacts on ASIP-covered fish and wildlife species.

6.3.1 Fish

The Mountain House and River Islands developments and other future state, tribal, local, and private activities in the study area are anticipated to occur, and environmental conditions affected by future activities may harm aquatic life and habitat necessary to sustain the listed species.

Decline of listed and proposed threatened and endangered species is primarily attributable to habitat factors. These factors include changes to:

- channel morphology,
- substrate,
- estuarine habitat conditions,
- riparian areas,
- contaminants,
- biological communities,
- flow, and
- fish passage.

Major activities potentially contributing to the decline of the listed fish species in the Delta include:

- entrainment in diversions,
- urbanization and associated point and nonpoint discharges,
- agricultural discharges,
- channelization, and
- altered hydrology attributable to diversions and upstream reservoir operations.

Increased contaminant inputs from future activities is of particular concern. Water quality in the Delta is impaired because of industrial, urban, and agricultural discharges, including stormwater runoff and treated effluent. In addition, the fortification of levees eliminates potential restoration opportunities that could be provided by levee setbacks that would reestablish seasonal habitat associated with flooding of upland and riparian areas.

Conservation measures implemented during construction and dredging activities for the SDIP would avoid or minimize contaminant inputs. The completed SDIP would not contribute to cumulative contaminant inputs. However, the head of Old River gate and agricultural gates may be operated to improve water quality conditions through tidal and net flow management in some Delta channels (e.g., DO levels in the Stockton Deep Water Ship Channel).

The footprint of the gates may result in habitat loss for listed fish species and could contribute to cumulative impacts of other activities. The impact, however, would be small. The footprint of the gates on Middle River, Old River at DMC, and the head of Old River would be similar to the existing footprint of the temporary barriers. The footprint of the gate on Grant Line Canal would be in a new location, but removal of the existing temporary barrier would reestablish a similar area of potential habitat. Dredging would increase channel depth, but the overall shallow-water habitat area would remain unchanged, and habitat quality

would be similar to existing conditions following the temporary disturbance of substrate.

Implementation of the environmental commitments and ASIP conservation measures will avoid, minimize, and compensate for adverse impacts of SDIP actions on listed fish species. The SDIP is not expected to contribute to cumulative impacts on listed fish species, and additional conservation measures are not required beyond those proposed for each potential impact described in Chapters 4 and 5.

6.3.2 Wildlife

The Mountain House and River Islands developments and other future state, tribal, local, and private activities in the study area are anticipated to occur, and environmental conditions affected by future activities may harm wildlife and habitat necessary to sustain the listed species.

Decline of listed and proposed threatened and endangered species is primarily attributable to habitat factors. These factors include changes to or loss of:

- tidal perennial aquatic habitat,
- tule and cattail tidal emergent wetland,
- riparian habitat, and
- upland cropland.

Major activities potentially contributing to the decline of the listed species in the Delta include:

- urbanization and other development,
- changes in agricultural practices,
- channelization,
- increased human disturbance, and
- introduction of domestic animals.

Gate construction and channel dredging associated with the SDIP will not contribute to these activities. Therefore, the SDIP will not contribute to cumulative impacts on federally listed wildlife species.

Implementation of the environmental commitments and ASIP conservation measures will avoid, minimize, and compensate for adverse impacts of SDIP actions on listed wildlife species. The SDIP is not expected to contribute to cumulative impacts on listed wildlife species, and additional conservation measures are not required beyond those proposed for the potential impacts described in Chapters 4 and 5.

6.4 Summary

Based on the assessment of cumulative impacts, implementation of the SDIP, in conjunction with the SDIP environmental commitments and the ASIP conservation measures, will not contribute to cumulative impacts on ASIP-covered fish and wildlife species that are known to occur in the study area. Consequently, no additional conservation measures are required beyond those proposed for the potential impacts described in Chapters 4 and 5.